

**PATENT**

**INSTITUT FRANÇAIS DU PÉTROLE**

**IMPROVED DEVICE FOR MIXING AND DISTRIBUTING A GAS PHASE AND A  
LIQUID PHASE SUPPLIED TO A GRANULAR BED**

**C Boyer and V Coupard**

**A B S T R A C T**

The present invention concerns an improved device for mixing and distributing a gas phase and a liquid phase over a granular bed described in a prior application.

The improvement essentially consists of employing an annular peripheral zone inside a reactor via which liquid is introduced and which acts as a buffer zone against fluctuations in the flow of the liquid phase.

The invention also concerns a catalytic bed chemical reactor using said device, and a process for chemical conversion, in particular for the hydrotreatment of hydrocarbons using said reactor.

Figure 1 to be published.